CLAIMS

1. A method of managing a transmission system wherein a plurality of sets of samples (N x M) is subject to an integral transform (41), transmitted (20) in said integral-transformed format and subject to a complementary integral transform (42) to reconstruct said plurality of set of samples (N x M), characterized in that the method includes the steps of:

- including in said system a plurality of terminals (14),

- assigning to said terminals (14) respective non-overlapping sets of samples or positions within said plurality of sets of samples, and

- transmitting a set (X_1, X_2, ... X_N) of non-zero samples pertaining to a first terminal (14) of said plurality by inserting said samples in the respective position assigned to said first terminal.

2. The method of claim 1, characterized in that it includes the steps of:

- including in said system at least one further terminal (13) adapted for exchanging samples with said plurality of terminals (14),

- causing said at least one further terminal (20) to subject to at least one of said integral transform (41) and said complementary integral transform (42) a plurality of sets of samples including at least two non-overlapping sets of non-zero samples, said two non-overlapping sets of samples pertaining to two respective different terminals (14) of said plurality.

3. The method of claim 1, characterized in that said integral transform is selected from the group consisting of the Fast Fourier Transform (FFT) and the Inverse Fast Fourier Transform (IFFT).

4. The method of claim 1, characterized in that it includes the steps of transmitting said samples in

said integral transformed format over a millimetre-wave carrier.

5. The method of claim 4, characterized in that said millimetre-wave carrier is selected in the frequency range of 60 GHz.

6. A transmission system, characterised in that it comprises:

- an integral transform module (41) for subjecting a plurality of sets of samples including at least one set (X_1, X_2, ... X_N) of a non-zero samples to an integral transform,

- a transmitter (20) for transmitting assigned non-overlapping sets comprising at least one set (X_1, X_2, ... X_N) of samples in said integral-transformed format,

- a receiver (20) for receiving said sets of samples transmitted in said integral-transformed format, and

- a complementary integral transform module (42) for subjecting said samples transmitted in said integral-transformed format as received by said receiver (20) to a complementary integral transform and reconstructing there-from said at least one set of non-zero samples.

7. The system of claim 6, characterised by at least one terminal having assigned a non-overlapping set of samples or position within said plurality of sets of samples and comprising at least one of:

- said integral transform module (41) and of said transmitter, or

- said receiver (20) and said complementary integral transform module (42).

8. The system of claim 6 or 7, characterized in that it comprises at least one further terminal (13) adapted for exchanging samples with said plurality of terminals (14), said at least one further terminal (20)

including at least one of said integral transform module (41) and complementary integral transform module (42) for subjecting to at least one of said integral transform and said complementary integral transform (42) sets of samples including at least two non-overlapping sets of non-zero samples, non-overlapping sets of samples pertaining to two respective different terminals (14) of said plurality.

9. The system of claim 8, in the form of a WLAN network, characterized in that said at least one further terminal (13) is an access point of said WLAN network.

10. The system of claim 6, characterized in that said at least one of a transmitter and receiver (20) operates over a millimetre-wave carrier.

11. The system of claim 10, characterized in that said at least one of a transmitter and receiver (20) operates over a carrier in the frequency range of 60 GHz.

12. A transmitter terminal (13, 14) for use in the system of claim 6, characterized in that it comprises:

- a buffer (43) for receiving said plurality of sets of samples, and
- an integral transform module (41) for subjecting said plurality of sets of samples in said buffer (43) to an integral transform to generate signals to be transmitted in an integral transformed format, and
- sample allocation circuitry (37, 38) for selectively arranging at least one set of generally non-zero samples to be transmitted in a respective position of said buffer (43).

13. The transmitter terminal of claim 12, characterized in that said allocating circuitry (37, 38) is configured for allocating at least a single set of generally non-zero samples in a single, respective

set of positions of said buffer (43), said set allocation being indicative of said transmitter terminal.

14. The transmitter terminal of claim 11, characterized in that it includes a RF module (20) operating in the millimetre-wave range.

15. The transmitter terminal of claim 14, characterized in that said RF module operates in the range of 60 GHz.

16. A receiver terminal for use in the system of claim 6, characterized in that it includes:

- a receiver (20) for receiving samples transmitted in said integral-transformed format,

- a buffer (43) for receiving said plurality of sets of samples, and

- a complementary integral transform module (41) for subjecting said sets of samples in said buffer (43) to a complementary integral transform and reconstructing there-from said at least one set of generally non-zero samples, and

- sample allocation circuitry (37, 38) for selectively arranging at least one set of generally non-zero samples in a respective position of said buffer (43).

17. The receiver terminal of claim 16, characterized in that said allocating circuitry (37, 38) is configured for allocating at least a single set of generally non-zero samples in a single, respective set of positions of said buffer (43), said set allocation being indicative of the transmitter.

18. The receiver terminal of claim 16, characterized in that it comprises a receiver (20) operating in the millimetre-wave range.

19. The receiver terminal of claim 18, characterized in that said receiver (20) operates in the range of 60 GHz.

20. A computer program product directly loadable in the internal memory of a computer and including software code portions performing the method of any of claims 1 to 5, when said product is run on a computer.

21. A computer program product directly loadable in the internal memory of a computer and including software code portions for implementing the transmitter terminal of any of claims 12 to 13, when said product is run on a computer.

22. A computer program product directly loadable in the internal memory of a computer and including software code portions for implementing the receiver terminal of any of claims 16 to 17, when said product is run on a computer.